

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: P238732

Luminaire Tested: **14ENA-LD2-33-UNV-L950-CD1-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P238732  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1710-395-5)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 14ENA-LD2-33-UNV-L950-CD1-U  
Description: METALUX ENCOUNTER 1X4 LED TROFFER  
AIR-VENTED OPTION  
Light Source: (224)5000K CCT, 90 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2733.0 lumens  
Efficiency: N/A  
Efficacy: 97.3 lumens/watt  
Spacing Criteria (0/90/45): 1.28 / 1.27 / 1.39  
Luminous Opening: Rectangular (W 0.67' x L: 3.83' x H: 0')  
CIE Type: Direct

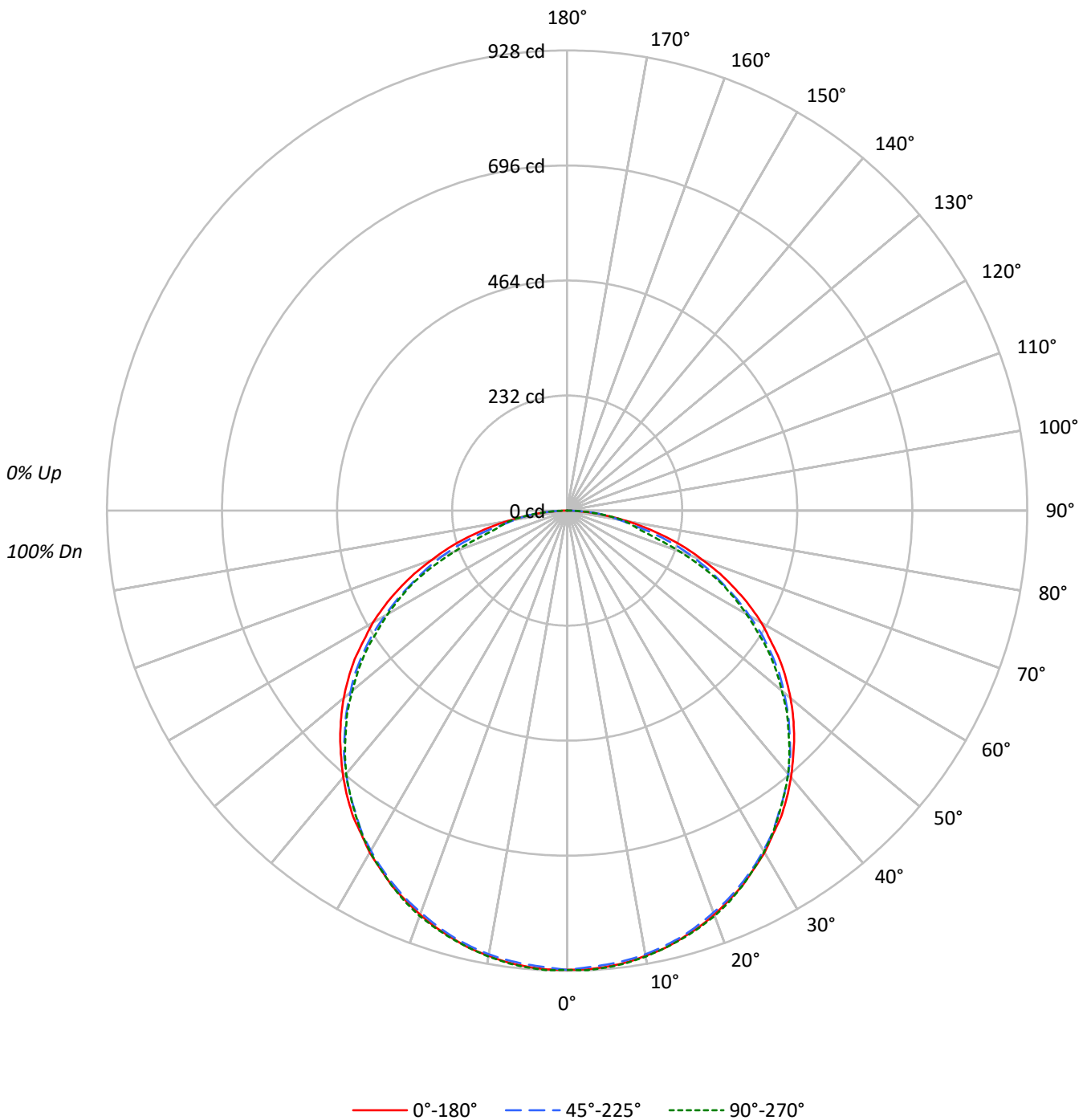
Input Watts (W): 28.1  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| RF  | 20  |     |     |     | 20  |     |     |     | 20  |     |     |     | 20  |     |     |     | 20  |     |
| RC  | 80  |     |     |     | 70  |     |     |     | 50  |     |     |     | 30  |     |     |     | 10  | 0   |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 0   |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1   | 109 | 104 | 99  | 95  | 106 | 101 | 97  | 94  | 97  | 94  | 91  | 93  | 90  | 88  | 90  | 87  | 85  | 83  |
| 2   | 99  | 90  | 83  | 77  | 96  | 88  | 82  | 76  | 85  | 79  | 75  | 81  | 77  | 73  | 78  | 75  | 71  | 69  |
| 3   | 90  | 79  | 71  | 64  | 87  | 77  | 70  | 63  | 74  | 68  | 62  | 72  | 66  | 61  | 69  | 64  | 60  | 58  |
| 4   | 82  | 70  | 61  | 54  | 80  | 68  | 60  | 54  | 66  | 59  | 53  | 64  | 57  | 52  | 61  | 56  | 51  | 49  |
| 5   | 75  | 62  | 53  | 46  | 73  | 61  | 53  | 46  | 59  | 51  | 46  | 57  | 50  | 45  | 55  | 49  | 45  | 42  |
| 6   | 69  | 56  | 47  | 40  | 68  | 55  | 46  | 40  | 53  | 46  | 40  | 51  | 45  | 39  | 50  | 44  | 39  | 37  |
| 7   | 64  | 51  | 42  | 36  | 63  | 50  | 41  | 35  | 48  | 41  | 35  | 47  | 40  | 35  | 45  | 39  | 35  | 33  |
| 8   | 60  | 46  | 38  | 32  | 58  | 45  | 37  | 32  | 44  | 37  | 31  | 43  | 36  | 31  | 42  | 36  | 31  | 29  |
| 9   | 56  | 42  | 34  | 28  | 54  | 42  | 34  | 28  | 41  | 33  | 28  | 40  | 33  | 28  | 38  | 32  | 28  | 26  |
| 10  | 52  | 39  | 31  | 26  | 51  | 39  | 31  | 26  | 38  | 30  | 26  | 37  | 30  | 25  | 36  | 30  | 25  | 24  |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 3901 | 3901 | 3901 |
| 5°  | 3904 | 3886 | 3910 |
| 10° | 3900 | 3887 | 3906 |
| 15° | 3894 | 3881 | 3900 |
| 20° | 3886 | 3866 | 3899 |
| 25° | 3882 | 3861 | 3882 |
| 30° | 3872 | 3851 | 3865 |
| 35° | 3871 | 3826 | 3834 |
| 40° | 3861 | 3814 | 3814 |
| 45° | 3856 | 3778 | 3761 |
| 50° | 3854 | 3740 | 3702 |
| 55° | 3841 | 3692 | 3639 |
| 60° | 3810 | 3578 | 3518 |
| 65° | 3729 | 3427 | 3385 |
| 70° | 3576 | 3292 | 2972 |
| 75° | 3362 | 2963 | 2493 |
| 80° | 2979 | 2559 | 2804 |
| 85° | 2305 | 2653 | 2513 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 87.7   | 3.2       |
| 10°-20°   | 251.9  | 9.2       |
| 20°-30°   | 384.0  | 14.0      |
| 30°-40°   | 467.6  | 17.1      |
| 40°-50°   | 491.6  | 18.0      |
| 50°-60°   | 451.3  | 16.5      |
| 60°-70°   | 346.7  | 12.7      |
| 70°-80°   | 193.5  | 7.1       |
| 80°-90°   | 58.7   | 2.1       |
| 90°-100°  | 0.0    | 0.0       |
| 100°-110° | 0.0    | 0.0       |
| 110°-120° | 0.0    | 0.0       |
| 120°-130° | 0.0    | 0.0       |
| 130°-140° | 0.0    | 0.0       |
| 140°-150° | 0.0    | 0.0       |
| 150°-160° | 0.0    | 0.0       |
| 160°-170° | 0.0    | 0.0       |
| 170°-180° | 0.0    | 0.0       |
| 0°-30°    | 723.6  | 26.5      |
| 0°-40°    | 1191.1 | 43.6      |
| 0°-60°    | 2134.0 | 78.1      |
| 0°-90°    | 2733.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2733.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 926 | 926   | 926 | 926   | 926 |      |
| 5°  | 923 | 923   | 919 | 923   | 925 | 88   |
| 15° | 893 | 893   | 890 | 893   | 894 | 252  |
| 25° | 835 | 832   | 831 | 834   | 835 | 385  |
| 35° | 753 | 750   | 744 | 746   | 746 | 471  |
| 45° | 647 | 643   | 634 | 631   | 631 | 499  |
| 55° | 523 | 519   | 503 | 494   | 496 | 466  |
| 65° | 374 | 364   | 344 | 340   | 340 | 370  |
| 75° | 207 | 196   | 182 | 158   | 153 | 218  |
| 85° | 48  | 49    | 55  | 54    | 52  | 58   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 22.5° | 45°   | 67.5° | 90°   |
|-------|-------|-------|-------|-------|-------|
| 0°    | 926.2 | 926.2 | 926.2 | 926.2 | 926.2 |
| 2.5°  | 926.2 | 926.2 | 921.9 | 926.2 | 927.7 |
| 5°    | 923.3 | 923.3 | 919.0 | 923.3 | 924.8 |
| 7.5°  | 919.0 | 919.0 | 914.7 | 917.5 | 920.4 |
| 10°   | 911.8 | 911.8 | 908.9 | 911.8 | 913.2 |
| 12.5° | 904.5 | 903.1 | 900.2 | 903.1 | 904.5 |
| 15°   | 893.0 | 893.0 | 890.1 | 893.0 | 894.4 |
| 17.5° | 881.4 | 880.0 | 877.1 | 881.4 | 882.9 |
| 20°   | 867.0 | 865.5 | 862.6 | 867.0 | 869.9 |
| 22.5° | 851.1 | 849.6 | 848.2 | 852.5 | 854.0 |
| 25°   | 835.2 | 832.3 | 830.8 | 833.7 | 835.2 |
| 27.5° | 815.0 | 813.5 | 812.1 | 813.5 | 815.0 |
| 30°   | 796.2 | 793.3 | 791.8 | 791.8 | 794.7 |
| 32.5° | 773.0 | 771.6 | 770.2 | 771.6 | 771.6 |
| 35°   | 752.8 | 749.9 | 744.1 | 745.6 | 745.6 |
| 37.5° | 728.3 | 723.9 | 719.6 | 719.6 | 719.6 |
| 40°   | 702.2 | 699.4 | 693.6 | 692.1 | 693.6 |
| 42.5° | 674.8 | 671.9 | 666.1 | 661.8 | 663.2 |
| 45°   | 647.3 | 643.0 | 634.3 | 631.4 | 631.4 |
| 47.5° | 618.4 | 614.1 | 604.0 | 599.7 | 601.1 |
| 50°   | 588.1 | 582.3 | 570.8 | 565.0 | 565.0 |
| 52.5° | 556.3 | 550.5 | 539.0 | 531.7 | 531.7 |
| 55°   | 523.1 | 518.7 | 502.8 | 494.2 | 495.6 |
| 57.5° | 485.5 | 481.2 | 465.3 | 455.2 | 455.2 |
| 60°   | 452.3 | 443.6 | 424.8 | 417.6 | 417.6 |
| 62.5° | 414.7 | 404.6 | 385.8 | 377.1 | 378.6 |
| 65°   | 374.2 | 364.1 | 343.9 | 339.6 | 339.6 |
| 67.5° | 333.8 | 325.1 | 306.3 | 299.1 | 291.9 |
| 70°   | 290.4 | 281.8 | 267.3 | 250.0 | 241.3 |
| 72.5° | 250.0 | 239.9 | 226.9 | 200.8 | 192.2 |
| 75°   | 206.6 | 196.5 | 182.1 | 157.5 | 153.2 |
| 77.5° | 164.7 | 156.1 | 135.8 | 130.0 | 132.9 |
| 80°   | 122.8 | 119.9 | 105.5 | 111.3 | 115.6 |
| 82.5° | 82.4  | 80.9  | 83.8  | 86.7  | 86.7  |
| 85°   | 47.7  | 49.1  | 54.9  | 53.5  | 52.0  |
| 87.5° | 20.2  | 24.6  | 23.1  | 23.1  | 23.1  |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)